

**REMARKS**

Claims 1-17 were pending in this application. By this Amendment, claims 1-5 are amended, and new claims 18-20 are added. Thus, upon entry of this amendment, claims 1-20 will be pending in this application. Amendments to the claims are supported by the Specification as filed. In particular, the amendment to claim 1 reciting "the full-length amino acid sequence of the protein is identical by at least 90% to the full-length amino acid sequence of SEQ ID NO: 1" is supported in the specification, for example, by the elected species. Specifically, the full-length amino acid sequence of the elected species represented by SEQ ID NO: 7 is identical by at least 90% to the full-length amino acid sequence of SEQ ID NO: 1. Support for new claim 20 can be found in the specification, for example, at page 19, lines 12-13 and page 21, lines 26-27. No new matter is added. Reconsideration of the rejections of the claims is respectfully requested in light of the following remarks.

Entry of this Amendment is proper under 37 C.F.R. § 1.116 since the amendments: (a) place the application in condition for allowance for the reasons discussed herein; (b) do not raise any new issues requiring further search and/or consideration on the part of the Examiner as the Amendment merely clarifies the claimed features of the invention; (c) satisfy a requirement of form asserted in the previous Office Action; (d) do not present any additional claims without canceling a corresponding number of finally rejected claims; and (e) place the application in better form for appeal, should an appeal be necessary. The Amendment is necessary and was not earlier presented because it is made in response to objections raised in the Final Rejection. Entry of the Amendment is thus respectfully requested.

**Objections to the claims**

Claims 1-5 are objected to because of the recitation of non-elected subject matter. Applicants request that this objection be held in abeyance until there is an indication of allowable subject matter.

**Rejections under 35 U.S.C. §112**

Claims 1-5 are rejected under 35 U.S.C. §112, second paragraph as being allegedly indefinite. The Examiner asserts that the recitation of “is in sequence alignment with SEQ ID NO: 1” in claim 1 is confusing. Applicants have amended claim 1 to delete the above recitation.

Claims 1 and 5 are rejected under 35 U.S.C. §112, first paragraph. In particular, the Examiner alleges that the recitation of “fragments” in claim 1 fails to comply with the written description and enablement requirement. Applicants have amended claim 1 to obviate this rejection.

In view of the above, applicants respectfully request withdrawal of the 35 U.S.C. §112 rejections of the claims.

**Rejections under 35 U.S.C. §102**

Claim 1 is rejected under 35 U.S.C. §102(b) as allegedly anticipated by Prasher (U.S. Patent No. 5,360,728, hereinafter “Prasher”) and under 35 U.S.C. §102(a) as allegedly anticipated by Tsuzuki et al. (J. Biol. Chem., 280(40), 34324-34331, hereinafter “Tsuzuki”). Applicants respectfully traverse these rejections.

Applicants submit that neither Prasher nor Tsuzuki disclose each and every element of claim 1. First, Prasher and Tsuzuki fail to disclose clytin or variants of clytin. Second, the full-length amino acid sequence of the aequorin variants of Prasher and Tsuzuki do not show at least 90% identity to the full-length amino acid sequence of SEQ ID NO: 1 as recited in claim 1. For at least the above reasons, claim 1 is not anticipated by Prasher or Tsuzuki. Accordingly, Applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. §102(b) rejection of claim 1 over Prasher and the 35 U.S.C. §102(a) rejection of claim 1 over Tsuzuki.

**Rejection under 35 U.S.C. §103**

Claim 5 is rejected under 35 U.S.C. §103(a) as being allegedly obvious over either Prasher or Tsuzuki. Applicants respectfully traverse this rejection.

Claim 5 depends from claim 1. As discussed above, neither Prasher nor Tsuzuki disclose or teach the protein of claim 1. For at least the above reasons, claim 1 is not obvious over Prasher or Tsuzuki. Because claim 5 depends from claim 1, claim 5 is also not obvious over Prasher or Tsuzuki. Accordingly, Applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. §103(a) rejection of claim 5 over either Prasher or Tsuzuki.

If for any reason the Examiner feels the application is not in condition for allowance it is respectfully requested that he contact, by telephone, the undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this case.

In the event that any fees are due with respect to this paper, please charge Deposit Account No. 01-2300, referencing Atty. Docket No. 100506.00028.

Respectfully submitted,



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